

## APPENDIX C

# **AGENDAS AND GUIDELINES FOR SELECTED STAKEHOLDER AND EXPERT MEETINGS**

MAY 21-22, 2001. SYMPOSIUM ON ALLOCATION OF FEDERAL  
RESOURCES FOR SCIENCE AND TECHNOLOGY

OCTOBER 20, 2000. MEETING WITH ECONOMISTS AND FEDERAL BUDGET EXPERTS

AUGUST 3-4, 2000. MEETING WITH FEDERAL AGENCIES ON THE FEDERAL R&D  
BUDGET ALLOCATION PROCESS

NOVEMBER 18-20, 1999. SYMPOSIUM ON INTERNATIONAL MODELS  
FOR S&T BUDGET COORDINATION AND PRIORITY SETTING

## AGENDA

**SYMPOSIUM ON ALLOCATION OF FEDERAL RESOURCES  
FOR SCIENCE AND TECHNOLOGY**

## Monday, May 21

- 2:00-2:20 Introduction and Overview: Eamon Kelly, NSB Chairman
- 2:20-2:30 Welcome: Rita Colwell, NSF Director
- 2:30-3:00 Keynote Address: Newt Gingrich, U.S. Commission on National Security/21<sup>st</sup> Century and Former Speaker of the House:  
*The Role of Federal Research in the Nation's Prosperity and Security*
- Break*
- 3:10-5:30 The Case for a Better Process  
Moderator: Joseph Miller, NSB member
- OMB Perspective: Kathleen Peroff, Deputy Associate Director for National Security
  - Congressional perspective: Scott Giles, Deputy Chief of Staff, House Committee on Science
  - Research funders and performers: Erich Bloch, Washington Advisory Group, Former Director, NSF
  - Higher Education: Donald Langenberg, Chancellor, University System of Maryland
- 5:30-6:15 Discussion
- 6:15-7:15 *Reception (by invitation): National Science Board Suite, Room 1225*

## Tuesday, May 22

- 8:30-8:45 Welcome and Introduction: Eamon Kelly, NSB Chair
- 8:45-10:45 Improving the Budget Process for S&T  
Moderator: John Armstrong, NSB member
- Lead: Lewis Branscomb, American Association for the Advancement of Science/Kennedy School of Government, Harvard University
  - American Enterprise Institute: Claude Barfield
  - Budget Support for the White House and Congress:
    - OMB: Steven Isakowitz, Branch Chief
    - Senate: Cheh Kim, Senate staff
  - National Academies: James Duderstadt, University of Michigan
- Break*
- 11:00-12:00 Discussion
- 12:00-1:00 *Lunch (by Invitation): Board Suite, Room 1225*

- 1:00-3:00      Evaluating and Identifying Priorities for Federal Research: The Role of the Science and Engineering Communities
- Moderator: Robert Richardson, NSB Member
- Lead: Senior researcher: Paul Romer, Stanford University
  - Disciplinary communities
    - Astronomy and Astrophysics: Joseph Taylor, Princeton University
    - Computing Research Association (CRA): Andries van Dam, Brown University
    - Federation of American Societies for Experimental Biology (FASEB): John Suttie, Past President
    - Environmental Research: Kenneth Brink, Woods Hole Oceanographic Institution, Chair, Ocean Studies Board, NAS
  - Industry research: Henry Weinberg, Symyx Technologies, Inc., Chief Technology Officer
  - Higher education: Nils Hasselmo, President, Association of American Universities
- Discussion*
- Break*
- 4:00-5:45      Better Data and Analyses
- Moderator: Eamon M. Kelly, NSB Chairman
- Lead: Albert Teich, AAAS
  - Agencies/Departmental Role:
    - NSF: Rita Colwell, Director
    - DOE: James Decker, Acting Director, Office of Science
    - NIH: Yvonne T. Maddox, Acting Deputy Director
    - DoD: Delores Etter, Acting Director, DDR&E
- 5:45-6:30      Discussion/Concluding remarks
- 6:30              Adjourn

## EXAMPLE LETTER TO SPEAKERS AND PANELISTS

April 25, 2001

I am writing to invite you to participate in the upcoming National Science Board symposium on the Allocation of Federal Resources for Science and Technology, May 21-22. Enclosed is the draft discussion paper, *The Scientific Allocation of Scientific Resources*, that lays out our preliminary recommendations on improving the expert advice and data to inform Federal research budget allocation decisions, which will serve as the focus of the symposium. I hope you will be able to participate in a panel discussion on May 2X, emphasizing on our recommendation(s) on (one or more specific recommendations in the discussion document) representing the perspective of (sector, organization, or community).

By way of background, over the last two years the Board has undertaken a study of methodologies and criteria to set priorities for Federal research funding across scientific fields and, further, to define a process that would be effective in building broad public and scientific community support for, and involvement in, priority setting for federally supported research. Our study has addressed priority setting practices for publicly funded research, both in the U.S. and in other countries.

We have commissioned two literature reviews, one by the RAND Science and Technology Policy Institute on Federal support for research, the existing tools to support research budget allocation decisions, and current mechanisms for input on those decisions. The second study, by SRI International, examined the literature on international models of S&T budget coordination and priority setting, focusing on eight foreign governments, with presentations by top-ranking science officials for each. We also heard presentations from experts on specific methodologies proposed or in use to assist priority setting in research budgets.

The Strategic Science and Engineering Policy Issues committee, which is undertaking this study for the Board, has met with representatives of the Office of Science and Technology Policy (OSTP), Office of Management and Budget (OMB), the National Academies, and Congressional staff who expressed considerable interest in improving the process by which funding decisions are made for federally supported research. The committee has arrived at some preliminary conclusions from these sources and, as part of our study, begun a dialog with policy officials most intimately involved in the budget process in the Federal research funding agencies.

Enclosed is a copy of a preliminary agenda for the event. We would ask that you and other panel members take a few minutes at the beginning of the panel discussion to outline your reactions and thoughts on the report, focusing on recommendation(s)\_\_\_\_, followed by a discussion with other members of the panel. A more general discussion including NSB members and others in the audience will follow.

This panel is scheduled to begin at\_\_\_\_ on \_\_\_\_\_, May 2X. I have asked the National Science Board office to contact you concerning your availability for this event. I hope you will be able to join us and contribute to this important discussion.

Sincerely,

Eamon M. Kelly, Chairman  
National Science Board and  
Committee on Strategic Science  
and Engineering Policy Issues

Enclosures

## AGENDA

**NSB AD HOC COMMITTEE ON STRATEGIC SCIENCE AND  
ENGINEERING POLICY ISSUES MEETING WITH FEDERAL  
BUDGET EXPERTS AND ECONOMISTS**

October 20, 2000

- 8:30-8:45      Introductory remarks, Dr. Eamon Kelly, NSB Chairman
- 8:45-10:45     *Setting Priorities for Federal Research: Economists' Perspectives on  
the Federal Budget Process*
- Moderator: Dr. Eamon Kelly, NSB Chairman
- (1) June O'Neill, Baruch College, Former Director, CBO
  - (2) Kathryn Shaw, Council of Economic Advisors
- 10:45-11:00    *Break*
- 11:00-12:30    *Social and Private Returns on Investment in Federally-funded  
Research*
- Moderator: Dr. Joseph Miller, NSB
- (1) Wesley Cohen, Carnegie-Mellon (by video)
  - (2) Paul Romer, Hoover Institution, Stanford (by video)
- 12:30-1:00     *Lunch*
- 1:00-2:00      *Committee Discussion*

## AGENDA

**NSB COMMITTEE ON STRATEGIC SCIENCE AND ENGINEERING  
POLICY ISSUES MEETING WITH FEDERAL AGENCIES ON THE FEDERAL R&D  
BUDGET ALLOCATION PROCESS**

August 3-4, 2000

- August 3** Room 1225, Board Suite
- 6:00-7:30 Reception, NSB, DPG and Agency guests
- August 4** Room 1225, Board Room
- 8:30-8:45 Introduction by E. Kelly, Chairman, Strategic Policy Issues Committee
- 8:45-9:15 Remarks by Dr. Neal Lane, Assistant to the President for Science and Technology
- 9:15-10:00 Dr. Bruce Don, Science & Technology Policy Institute, RAND, "Setting Priorities and Coordinating Federal R&D Across Fields of Science"
- Comment from OMB, Kathleen Peroff, Deputy Associate Director for Energy & Science
- 10:00-10:15 *Break*
- 10:15-12:15 **Major civilian research agencies:** *Anita Jones, NSB*
- Dr. Ernest Moniz, Under Secretary, DOE
  - Dr. Mildred Dresselhaus, Director, Office of Science, DOE
  - Dr. Ruth Kirschstein, Acting Director, NIH (HHS)
  - Dr. Rita Colwell, NSF Director
  - Dr. Kathie L. Olsen, Chief Scientist, NASA
- 12:15-12:45 Discussion
- 12:45-1:45 *Lunch*
- 1:45-2:45 **Major defense research agencies:** *John Armstrong, NSB*
- Robert V. Tuohy, Director, S&T Plans and Programs, DOD
  - Dr. David Crandall, Assistant Deputy Administrator for Research, Development and Simulation, DOE
- 2:45-3:15 Discussion
- 3:15-3:30 *Break*
- 3:30-4:45 **Civilian agencies funding natural resources and environmental R&D:** *Joseph Miller, NSB*
- Dr. Floyd P. Horn, Administrator, Agricultural Research Service
  - Dr. Norine Noonan, Asst. Administrator for R&D, EPA
  - Dr. Ronald Baird, Director, National Sea Grant College, NOAA (DOC)
- 4:45-5:15 **Other civilian research programs:** *Robert Richardson, NSB*
- Dr. John R. Feussner, Chief R&D Officer, VA
  - Dr. Michael Casassa, Acting Director of the Program Office, NIST (DOC)
- 5:15-5:45 Discussion, concluding remarks

## AGENDA

## SYMPOSIUM ON INTERNATIONAL MODELS FOR S&T BUDGET COORDINATION AND PRIORITY SETTING

November 19-20, 1999

Co-sponsored by the National Science Board Committee on Strategic Science and Engineering Policy Issues and Task Force on International Issues in Science and Engineering

Thursday, November 18

6:00 pm      *Reception/Dinner (by invitation)*; Guest Speaker: Neal Lane, Science Adviser to the President, Room 375, National Science Foundation

Friday, November 19

Boardroom, Room 1235

8:30-9:00      Opening remarks: Eamon Kelly, NSB; Chairman, Diana Natalicio, NSB Vice Chair  
Welcome: Rita Colwell, NSF Director

9:00-1:00      *Models of Change in Industrialized Countries*

Moderator, Dr. Joseph Miller, NSB

- **Germany:** Bernd Kramer, Science Counselor, German Embassy
- **France:** Jacques Sevin, Director of Strategy and Programs, Centre National de la Recherche Scientifique (CNRS)

*Break*

- **Japan:** Tsuyoshi Maruyama, Director of Planning and Evaluation Division, Science and Technology Policy Bureau, Science and Technology Agency

Summary and Discussion

1:00-2:00      *Lunch break*

2:00-5:15      *Models with Established Central Mechanisms*

Moderator: *Dr. Anita Jones, NSB*

- **European Union:** Graham Stroud, assistant to the Deputy Director, Research Directorate General, European Commission

*Break*

- **United Kingdom:** Jo Durning, Group Head of Transdepartmental Science and Technology, Office of Science and Technology (OST)

Summary and Discussion

Saturday, November 20

8:30-11:00      *Models of Change in Smaller R&D Systems*  
Moderator: *Dr. Pamela Ferguson*

- **Korea:** Heeseung Yang, Managing Director, National Research and Development (R&D) Evaluation, Korea Institute of Science and Technology Evaluation and Planning
- **Sweden:** Kerstin Eliasson, Director, Research Policy Directorate, Ministry of Education and Science
- **Brazil:** Luiz Antonio Barreto de Castro, Head of the Secretariat of Intellectual Property Rights, Empresa Brasileira de Pesquisa Agropecuária – Embrapa

*Break*

11:00-12:00      Summary and Discussion

## I. BACKGROUND AND OBJECTIVE OF THE SYMPOSIUM

In its Working paper on *Government Funding of Scientific Research* (NSB-97-186), the National Science Board identified a national interest in “some form of ‘comprehensive’ and ‘coherent’ coordination of Federally-financed research,” which would first require the development of “guidelines to provide clear direction on setting priorities within the Federal research budget.” The Strategic Plan of the National Science Board states that: “...the development of an intellectually well founded and broadly accepted methodology for setting priorities across fields of science and engineering is a prerequisite for a coherent and comprehensive Federal allocation process for research.” In recent years, stakeholders in both the Administration and the Congress have urged better coordination for the Federal budget for research, and the development of a methodology for priority setting across fields of science and agencies to further that objective.

As a consequence, the *Ad Hoc* Committee on Strategic Science and Engineering Policy Issues, acting in concert with the NSB Task Force on International Issues in Science and Engineering, undertook the arrangement of a “Symposium on International Models for S&T Budget Coordination and Priority Setting. The objective of the Symposium and its background preparations was to provide a review of the relevant literature, as well as hearing the views of a number of active R&D policy makers across a variety of internationally representative countries. The Symposium introduced by remarks from the President’s Science Advisor on the evening of November 18, was held on November 19-20, 1999, in the NSF Board Room, where Committee and Task Force members heard presentations and engaged in dialogue with representatives of seven countries and one international entity, the European Union, on the topic. The participating countries were selected on the basis of the following criteria:

- Does the country have sufficient experience to serve as a model?
- Does the methodology or aspects of it have potential for application to the U.S.?
- Is the methodology sufficiently different from others to offer special lessons?
- Does inclusion of the country need to be considered for political or representational reasons?
- Are excellent presenters/spokespersons for the country’s system likely to be available?
- Does the system for government support of research appear to contribute positively to the scientific and engineering strength of the country?

The countries selected for participation included three large European nations – France, Germany, and the United Kingdom, as well as the European Union, which is a major sponsor of research. Two other industrialized nations, Japan, a major Asian industrial nation, and Sweden, a smaller but scientifically highly advanced country were included. One “Newly Industrialized Economy,” the Republic of Korea, and Brazil, the largest scientific presence in Latin America, filled out the roster of participants.

SRI International, a contractor, was asked to identify as potential speakers individuals with roles like that of the U.S. science advisor: in government; intimately knowledgeable about how the process works; and at a high level. Normally that would not be the minister of science or equivalent, who are often in office very briefly and who cannot speak from extensive experience about their government’s funding for R&D. Countries vary, but the individuals invited were all at a high level in government and very knowledgeable about how the research budget is actually developed.

The following framework for presentations was provided to the invited guests of the National Science Board:

## GUIDELINES FOR SPEAKERS

Your presentation should be limited to approximately 25 minutes, followed by a question and answer period with members of the Committee and the Task Force.

Board members will have received a briefing document on your country's R&D budget process prior to the Symposium, outlining the general structure and procedures for your national system as they are described in the published literature. We will be supplying you with a copy of that background document. We ask, therefore, that you assume that Board members are familiar with the background material and address your presentation to the following questions, as appropriate to your national system.

## QUESTIONS TO ADDRESS ON R&D BUDGET CO-ORDINATION AND PRIORITY SETTING

**Q1:** What needs are targeted in your country's R&D budget—government, industry, society as a whole? International cooperative R&D for activities such as megascience projects, major instrumentation, databases, or human resource capacity building?

**Q2:** In planning for your government's budget for R&D, how are appropriate levels of support determined for the budget as a whole and for programs and activities funded through the R&D budget?

**Q3:** Are the research activities of other countries a significant factor in developing your R&D budget? How do you evaluate research supported by other countries? Which other countries? How is this information used in your budgeting activities?

**Q4:** Please describe the priority setting process in detail.

- What are the key organizations or individuals involved in the priority setting process for the R&Dbudget? What measures or indicators, models or methodologies are employed in weighing alternative projects for government investments in R&D?
- How is the priority setting process applied to government support for *fundamental* research?

**Q5:** How do you determine that an area is worth pursuing as a national priority, or whether it should be left to other countries? How do you decide which areas should be pursued collaboratively?

- Do multinational themes, e.g. in the environment, enter into the process for determining national priorities for R&D?
- How are international collaborations supported: direct funding, in-kind contributions, other means?
- Does your government make any specific or special provisions for scientific cooperation with developing countries? If so, are these handled out of your science ministry or equivalent or some other part of the government?

**Q6:** What mechanisms and tools do you use to assess the benefits of scientific research and development and its contributions to your society?

- What units of analysis are used in measuring the return on government investment? e.g., government agencies and their programs; nongovernmental organizations or sectors that receive government support, such as universities or research institutes; scientific fields of study/disciplines; industrial research and technologies; occupational groups;

geographic/political units?

**Q7:** What data are available for measuring R&D investments and returns on your country's investments? Are these sources available in published or electronic form?